

## CLAIM LISTING

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously cancelled)
2. (Previously cancelled)
3. (Previously cancelled)
4. (Previously amended) A method for determining platelet functionality of a blood sample using a plunger sensor apparatus comprising two or more test cells and a plunger assembly within each test cell, the method comprising:
  - (a) dispensing an aliquot of said sample into each of said test cells;
  - (b) adding a selected amount of a platelet activating reagent to all but one of said aliquot samples to form a reaction mixture;
  - (c) adding a sufficient amount of a clotting reagent to each of said reaction mixtures to promote clotting of said aliquot samples;
  - (d) performing a clotting test on said aliquot samples by alternately lifting the plunger assembly in each cell and allowing the plunger assembly to descend through the test mixture, wherein all of said plunger assemblies are lifted in unison; and
  - (e) determining said platelet functionality of said sample by comparing the clotting times of said aliquot samples, wherein said clotting time of each aliquot sample is determined by measuring a change in viscosity of each of said aliquot samples.
5. (Amended) The method of claim 6, wherein said platelet activating reagent is 1-O-alkyl-2-acetyl-sn-glyceryl-3-phosphorylcholine.
6. (Amended) The method of claim 4, wherein said platelet activating reagent is selected from the group consisting of 1-O-alkyl-2-acetyl-sn-glyceryl-3-phosphorylcholine, collagen, epinephrine, ristocetin and arachidonic acid.
7. (Previously cancelled)
8. (Previously amended) A method for determining clotting characteristics of a blood sample using a plunger sensor apparatus comprising two or more test cells and a plunger assembly within each test cell, said method comprising:
  - (a) dispensing an aliquot of said sample into each of said test cell;
  - (b) adding a selected amount of a clotting affecting reagent to all but one of said aliquot samples to form a reaction mixture;

- (c) adding a sufficient amount of a clotting reagent to each of said reaction mixtures to promote clotting of said aliquot samples;
  - (d) performing a clotting test on said aliquot samples by alternately lifting the plunger assembly in each cell and allowing the plunger assembly to descend through the test mixture, wherein all of said plunger assemblies are lifted in unison; and
  - (e) determining the clotting characteristics of said sample by comparing the clotting times of said aliquot samples.
9. (Previously cancelled)
  10. (Previously amended) The method of claim 8, wherein said clotting affecting reagent is a platelet activating reagent.
  11. (Previously added) The method of claim 4, wherein the amount of said platelet activating agent in each said aliquot sample is between about 0 and about 2.76 micrograms.
  12. (Previously added) The method of claim 4, wherein the concentration of said platelet activating reagent in each said aliquot sample is between about 0 and about 150 nM.
  13. ( Previously cancelled)
  14. (Previously added) The method of claim 4, wherein said clotting reagent is kaolin.
  15. ( Previously cancelled)
  16. (Presently amended) The method of claim [[24]] 22, wherein the amount of said platelet activating agent in each said aliquot sample is between about 0 and about 2.76 micrograms.
  17. (Previously cancelled)
  18. (Presently amended) The method of claim [[24]] 22, wherein at least one of said aliquot samples contains no platelet activating reagent, and wherein each remaining aliquot sample comprises different amounts of said platelet activating reagent.
  19. (Previously presented) The method of claim 8, wherein said clotting reagent is kaolin.
  20. (Previously presented) The method of claim 8, wherein said clotting times are determined by measuring a change in viscosity of each of said aliquot samples.
  21. (Presently amended) The method of claim [[24]] 22, wherein said change in viscosity is measured by a plunger sensor technique.
  22. (Previously Amended) A method for performing an activated clotting time test on a sample of blood using a plunger assembly apparatus comprising a multicell test

cartridge, said cartridge comprising at least a first, a second and a third test cell and a plunger assembly within each of said test cells, each of said cells comprising a sufficient amount of a contact activator to achieve clotting, wherein said first cell further comprises a first amount of a platelet activating reagent and wherein said second cell comprises a second amount of said platelet activating reagent, said first and second amounts being different, said method comprising:

- (a) dividing said sample into first, second and third partial samples;
- (b) dispensing the first partial sample into the first test cell to form a first test mixture;
- (c) performing a first activated clotting time test on the first test mixture by reciprocating said plunger assembly within said first cell to obtain a first clotting time;
- (d) repeating the aforementioned steps of dispensing and performing an activated clotting time test on each of said second and third partial samples by reciprocating the plungers in said second and third cells at the same rate of reciprocation as in said first cell to obtain a second and third clotting time; and
- (e) comparing the clotting time of said first, second, and third partial samples to determine the activated clotting time of the sample of blood based on the clotting time times of said first, second and third partial samples.

23. (Previously cancelled)
24. (Presently amended) The method of claim [[24]] 22, wherein said platelet activating reagent is 1-O-alkyl-2-acetyl-sn-glyceryl-3-phosphorylcholine.
25. (Previously cancelled)
26. (Presently amended) The method of claim [[24]] 22, wherein said clotting times are determined by measuring a change in viscosity of each of said aliquot samples.
27. (Presently amended) The method of claim [[26]] 22, wherein said clotting reagent activator is kaolin.
28. (Previously presented) The method of claim 26, wherein said clotting times are determined by measuring a change in viscosity of each of said aliquot samples.
29. ( Previously cancelled)
30. (New) The method of claim 14, wherein said platelet activating agent is 1-O-alkyl-2-acetyl-sn-glyceryl-3-phosphorylcholine.
31. (New) The method of claim 22, wherein said platelet activating reagent is selected from the group consisting of 1-O-alkyl-2-acetyl-sn-glyceryl-3-phosphorylcholine,

collagen, epinephrine, and ristocetin.

32. (New) The method of claim 22, wherein the concentration of said platelet activating reagent in each said aliquot sample is between about 0 and about 150 nM.